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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,221	12/13/2001	Nathan S. Lewis	CIT1300-1	9894

41790 7590 06/08/2005

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EXAMINER

NOGUEROLA, ALEXANDER STEPHAN

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental
Office Action Summary

Application No.

10/017,221

Applicant(s)

LEWIS ET AL.

Examiner

ALEX NOGUEROLA

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/01/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is supplemental to the Office Action of May 10, 2005.

This Office action is in response to a voice mail message left by Mr. Baker on June 01, 2005, which noted that new claim 16 has not been addressed. The Examiner regrets any inconvenience to Applicants.

2. Unlike independent claim 1, claim 16 appears to be adequately limited with respect to the range of analytes. However, claims 11 and 12, although they do not depend from claim 16 raises a question as to whether claim 16 is enabled with regard to the scope of possible sensor types since claims 1 and 16 are the same except for the specified analytes in claim 16. So the Examiner's comments, with regard to enablement of different types of sensor arrays, on pages 4-6 of the Office Action of May 10, 2005 are also pertinent to claim 16.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1753

4. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for electrical-based sensors, such as, chemically-sensitive resistor sensors or metal oxide sensors, does not reasonably provide enablement for optical, magnetic, mechanical, or physical sensors or combinations thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Claim 16 is unbounded as to the type of sensor array. Claim 11 states that the sensors may be optical, electrical, magnetic, mechanical, physical, or a combination thereof. This appears to be a comprehensive list. Since claim 16 is the same as claim 1 except for the specified list of analytes in claim 16 this also suggest that a very large range of sensor types is contemplated for claim 16

The invention of claim 16 is of a complex nature as it uses a computer-supported system not to identify or quantitate, but to determine specific activities, chemical or physical properties, or functions of a large scope of organic functionalities with any type of sensor array.

Applicant's only example in his disclosure is predicting "the inhibitory action of a series of alcohols on cytochrome P-450 aniline p-hydroxylation" (described on pages 22-35 of the specification). This involves passing *gas phase* alcohols over a *resistance* sensor array to "train" it with alcohols used as standards and to test the sensor array with unknown alcohols. With only this example as guidance how is one with ordinary skill in the art to select the right sensor for the unknown analyte of interest and the

Art Unit: 1753

specific activity, chemical or physical property, or function of the analyte to be predicted? Can crystalline colloidal array sensors and capacitance sensors (claim 12) be used for determining the specific activity or function of ethers, ketones, or halide derivate for example, or even liquid alcohols? Can these sensors be used to determine any specific activity, chemical or physical property, or function of the claimed analytes? How is a magnetic sensor array to be used to predict the inhibitory action of alcohols on cytochrome P-450 aniline p-hydroxylation?

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a) what is meant by the "specific activity or function" of the claimed analytes?

For example what is meant by the specific activity or function of an alkane or polynuclear aromatic?

b) what is the scope of "the analyte is a chemical comprising ..." [emphasis added? The Examiner assumes that this means that the primary functionality of the analyte is one of the listed functionalities. So, for example a DNA molecule would not be such an analyte even though it has several or all of the claimed functionalities. In other words is claim 16 actually more limited in scope than claim 1?

Art Unit: 1753

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alex Noguerola
Primary Examiner
AU 1753
June 2, 2005